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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DOUYON, LORNA M

ART UNIT PAPER NUMBER

1751

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/717,729

Applicant(s)

STOLTE ET AL.

Examiner

Lorna M. Douyon

Art Unit

1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 4, 2006 has been entered.
2. Claims 1-69 are pending. Claims 1, 7, 33, 34, 36, 38 and 44 have been amended.
3. The rejection of claims 1, 7, 33, 34, 36, 38, and 44 for minor informalities is withdrawn in view of Applicants' amendment.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 5-9, 11-18, 21, 22, 34, 36, 38, 42-46, 48-55, 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Curry et al. (US Patent No. 4,560,492), hereinafter "Curry".

Art Unit: 1751

Curry teaches a granular laundry detergent composition (which reads on solid composition), prepared by spray drying (see col. 12, lines 13-15), which is essentially free of inorganic phosphate salts and comprising: (a) from about 10% to about 65% by weight of a detergent surfactant like anionic surfactants, nonionic surfactants and mixtures thereof, from about 3% to about 60% by weight of a detergency builder like water-insoluble sodium aluminosilicates and organic detergency builders; (c) from about 0.5% to about 10% by weight hydroxyethylethylenediaminetriacetic acid (HEDTA), or alkali metal salt thereof; (d) from 0% to about 75% by weight of a water-soluble inorganic detergency builder selected from the group consisting of alkali metal silicates, alkali metal carbonates and mixtures thereof (see claim 6; col. 2, lines 26-51). Suitable anionic surfactants include water-soluble alkyl sulfates (having straight alkyl radicals), see col. 3, lines 1-16. Suitable nonionic surfactants include the condensation product of ethylene oxide with a straight aliphatic alcohol having about 8 to about 24 carbon atoms (see col. 3, lines 26-45). The composition can also contain perfumes, colorants and antiredeposition agents (see col. 9, line 56) and water (see col. 12, lines 15-28). The composition does not contain components that can compete with the HEDTA for water and interfere with solidification as required in claims 18 and 55. The mixing of the ingredients, which comprises HEDTA and water, would distribute these components throughout the solid cleaning composition and binds the functional ingredient within the solid composition as required in claims 6 and 43, and would reasonably form a solid binding agent. Curry, however, fails to specifically disclose a solid composition comprising HEDTA and water, which is free of carbonate.

Art Unit: 1751

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a granular or solid composition comprising HEDTA and water because the teachings of Curry encompass these ingredients and to prepare said composition without carbonate because the carbonate is only optional as disclosed in claim 6 and col. 2, lines 48-51, and need not be present in the composition.

6. Claims 19-20 and 56-57 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Curry as applied to the above claims, and further in view of Magari et al. (US Patent No. 4,416,809), hereinafter "Magari".

Curry teaches the features as described above. Curry, however, fails to specifically disclose the amount of water in the spray-dried composition.

Magari teaches a spray dried granular detergent composition wherein the water content after spray drying is present in the range from 2-3 wt% of the composition (see Table 1 under col. 5-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to reasonably expect the water content in the spray dried detergent composition of Curry to be in the range from 2-3 wt% because it is known from Magari that a detergent composition which is spray dried usually contains such amount of water.

7. Claims 1-11, 13, 15-28, 30, 32-48, 50, 52-65, 67, 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steindorf (US Patent No. 5,340,501).

Steindorf teaches a detergent composition as a solid cast block which includes a sodium based alkaline source as a deterative component which is typically sodium hydroxide or sodium silicate (see col. 3, lines 1-9), potassium salt of an aminocarboxylic acid as a sequestrant, and may also include potassium based alkaline source, sodium salt of an aminocarboxylic acid, water for facilitating processing and permitting solidification, a hydrating agent for facilitating solidification, a secondary sequestrant, and/or other typical detergent additives such as dyes, perfumes, bleaching agents, fillers and the like (see col. 2, lines 44-55). The solid cast block detergent compositions are commonly produced from about 2 to about 20 kg in size (see col. 1, lines 20-22). One suitable aminocarboxylic acid chelating agent is N-hydroxyethyl-ethylenediaminetriacetic acid (HEDTA) (see col. 3, lines 38-42). The alkali metal salts of the aminocarboxylate sequestering agent should comprise about 20 to 40 wt% of the detergent composition (see col. 3, lines 55-59). The hydrating agent for facilitating solidification which includes anhydrous sodium carbonate, among others, is only optional (see col. 4, lines 9-29). A secondary sequestering agent includes sodium tripolyphosphate (see col. 5, line 23). The detergent composition should comprise about 15-25 wt%, preferably about 15-20 wt% water including both free water and water of hydration (see col. 5, lines 38-41). The detergent composition is conveniently formulated by sequentially (i) combining an aminocarboxylic acid sequestrant with a sufficient proportion of a potassium alkaline source, (ii) adding a sufficient proportion of a sodium alkaline source, (iii) adding other desired components such as additional water, a casting, a surfactant like nonionic surfactant, and/or a secondary chelating agent, and then (iv) casting the composition (see col. 2, lines 18-30; col. 4, lines 46-63). The detergent composition may be cast directly into a receptacle (see col. 6, lines 25-30). Steindorf, however,

Art Unit: 1751

fails to specifically disclose (1) a solid binding agent comprising HEDTA and water, and in their recited mole ratio and wherein the binding agent is free of carbonate, (2) the amount of water in the binding agent in the range of about 1 to about 10 wt% as required in claims 20 and 57, and (3) the composition being formed as a solid mass in the range of 50 grams or less as required in claims 24 and 61.

With respect to difference (1) it would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a solid binding agent comprising HEDTA and water which is free of sodium carbonate because sodium carbonate is only optional, and need not be added to the composition as disclosed in col. 4, lines 9-22, and to optimize the proportions of HEDTA and water because it is known to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

Art Unit: 1751

With respect to difference (2) as the word "about" permits some tolerance (see *In re Ayers*, 69 USPQ 109, and *In re Erickson*, 145 USPQ 207), the lower limit of about 15 wt% water of Steindorf may be considered to read on the upper limit of about 10 wt % of water of instant claims 20 and 57.

With respect to difference (3) it would have been obvious to one of ordinary skill in the art at the time the invention was made to change the size of the solid because a change in size is generally recognized as being within the level of ordinary skill in the art, see *In re Rose*, 105 USPQ 237 (CCPA 1955).

8. Claims 12, 14, 29, 31, 49, 51, 66 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steindorf as applied to the above claims, and further in view of Rolando et al. (US Patent No. 5,876,514), hereinafter "Rolando".

Steindorf teaches the features as described above. Steindorf, however, fails to disclose the specific nonionic surfactant which comprises linear alcohol, the incorporation of a linear alkylate sulfonate surfactant, and the composition in the form of an extrudate or a pellet.

Rolando teaches a similar composition comprising nonionic surfactants like the condensation of fatty alcohols having 8-20 carbon atoms and alkylene oxide (see col. 3, line 66 to col. 4, line 9), other surfactants which may be used as solidifying agent, for example, linear alkyl benzene sulfonate (see col. 9, line 65 to col. 10, line 5). The composition may take any number of physical forms including compressed, extruded solid or cast solid and the compressed solid includes solids formed by extrusion, tableting, pelletizing and the like (see col. 11, lines 51-64).



Art Unit: 1751

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the nonionic surfactant of Steindorf with the condensation of fatty alcohols having 8-20 carbon atoms and alkylene oxide nonionic surfactant of Steindorf because Steindorf desires nonionic surfactants which are stable under alkaline solution and Rolando provides such nonionic surfactant, to have incorporated a linear alkyl benzene sulfonate into the composition because this will assist in solidifying the composition as taught by Rolando and to have prepared the composition of Steindorf in an extrudate or pellet form because it is known from Rolando that similar compositions can be prepared in cast, extrudate and pellet form.

***Response to Arguments***

9. Applicant's arguments filed October 4, 2006 have been fully considered but they are not persuasive.

With respect to the rejection based upon Curry, Applicants argue that although Curry may disclose compositions that, at some point, include both HEDTA and water, Curry does not show, teach or suggest a solid binding agent that includes both HEDTA and water. Applicants also argue that Curry describes forming either liquid or granular compositions, and that the liquid composition cannot be considered as a solid binding agent, and the granular composition which is formed via a spray drying process would presumably remove the water required to form the claimed solid binding agent. Applicants then argue that simply because the composition of Curry may contain water does not show, teach or suggest that the water primarily associates with the binder.

Art Unit: 1751

The Examiner respectfully disagrees with the above arguments because Curry teaches a composition comprising HEDTA (see col. 2, lines 44-47) and water in a solid composition (see col. 12, lines 11-28), hence, the HEDTA should cooperate with the water in the formation of a binding agent as required in the present claims because same ingredients have been utilized, and therefore would exhibit the same function, absent evidence to the contrary.

Applicants also argue that even though Curry does not require the presence of carbonate, it is noted that Curry preferred granular compositions including a significant amount of carbonate as disclosed in col. 9, lines 25-35; and Example III in col. 12, line 23.

The Examiner respectfully disagrees with the above arguments because it is clear from col. 2, lines 26-51 and claim 6 that the composition comprises from 0% to about 75% by weight of a water-soluble inorganic detergency builder selected from the group consisting of alkali metal silicates, alkali metal carbonates and mixtures thereof (see claim 6; col. 2, lines 26-51). All disclosures of the prior art, including non-preferred embodiment, must be considered; and that non-preferred embodiments can be indicative of obviousness, see *Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lamberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler*, 177 USPQ 399.

With respect to the rejection based upon Curry in view of Magari, Applicants argue the same reasoning as in Curry above.

The above response to Curry applies here as well.

With respect to the rejection based upon Steindorf, Applicants argue that while Steindorf does teach a detergent composition comprising free water and water of hydration, the amount of

Art Unit: 1751

free water is not mentioned other than to state that it is employed to facilitate processing and solidification (col. 3, lines 62-63), and that none of the examples list water as an element.

The Examiner respectfully disagrees with the above arguments because it is clear from Steindorf that the detergent composition comprises water for facilitating processing and permitting solidification (see col. 2, lines 11-12; 50-51; col. 3, line 60 to col. 4, line 7). In col. 5, lines 38-41, Steindorf teaches that the detergent composition should comprise about 70-85 wt %, preferably about 75-85 wt %, solids and about 15-25 wt %, preferably about 15-20 wt %, water including both free water and water of hydration. Also, a reference is not limited to the working examples, see *In re Fracalossi*, 215 USPQ 569 (CCPA 1982).

With respect to the rejection based upon Steindorf in view of Rolando, Applicants argue the same reasoning as in Steindorf above.

The above response to Steindorf applies here as well.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is 571-272-1313. The examiner can normally be reached on Mondays-Fridays 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Lorna M. Douyon*

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PRIMARY EXAMINER